CLAIMS

We claim:

1. A method for anodic alkoxylation of an organic compound, in which a mixture containing the organic compound and an alcohol with 1-4 C atoms is passed through the anode space of a reactor divided into an anode space and a cathode space by means of a membrane electrode assembly (MEA), where the MEA consists of a membrane, both sides of which are provided with electrode layers, which is characterized by the fact that one uses a reactor with an MEA that has a cation exchanger membrane or a microporous polypropylene membrane, one or both electrode layers of which were produced using a carbon black and/or graphite, which can be doped with heavy metal, and a sulfonated polyfluorinated polymer or copolymer in a suspension containing a liquid suspension medium.

2. A method as in Claim 1, which is characterized by the fact that an MEA both electrode layers of which were produced using a suspension containing carbon black, graphite or platinum-doped carbon black is used.

3. A method as in Claim 1 or 2, which is characterized by the fact that one uses a reactor with an MEA the electrode layers of which were produced with a suspension as in Claim 1, including direct or indirect printing of the cation exchange membrane and removal of solvents contained in the liquid medium and thermal treatment of the membrane coated on both sides.

4. A method as in one of Claims 1-3, which is characterized by the fact that an organic compound from among the cyclic ethers, N-substituted amides, carbonyl compounds, especially ketones, alkylaromatic compounds and alkylheteroaromatic compounds is anodically alkoxylated.

5. A method as in one of Claims 1-4, which is characterized by the fact a cyclic ether from among the furans, dihydrofurans and tetrahydrofurans, 1,2-pyrans, and 1,4-pyrans and their di- and tetrahydro compounds, as well as the 1,4-pyrones and their di- and tetrahydro compounds, where in the case of the hydrogenated furans, pyrans and pyrones at least one C atom bonded to an ether oxygen atom has a hydrogen atom, is methoxylated or ethoxylated, especially methoxylated.

6. A method as in one of Claims 1-4, which is characterized by the fact an amide from among the lactams with 5-7 ring members, the N-acylated saturated and unsaturated N-heterocycles and the open-chain N-alkyl or N,N-dialkyl fatty acid amides, where a carbon atom bonded to a nitrogen has at least one hydrogen atom, is methoxylated or ethoxylated, especially methoxylated.

7. A method as in one of Claims 1-4, which is characterized by the fact a ketone with a methyl group or methylene group bonded to the carbonyl C atom is methoxylated or ethoxylated, especially methoxylated.

8. A method as in one of Claims 1-4, which is characterized by the fact a methyl-substituted aromatic compound or heteroaromatic compounds is methoxylated or ethoxylated, especially methoxylated.

9. A method as in one of Claims 1-8, which is characterized by the fact the alkoxylation is carried out in the alcohol corresponding to the alkoxy group as the solvent, at a voltage in the range from 1-50 volts, especially 1-25 volts.

10. A method as in one of Claims 1-10, which is characterized by the fact the alcohol mixture to be alkoxylated is sent through the anode space and then through the cathode space.